REMARKS

Claims 26 and 27 have been added. Accordingly, claims 1-4, 7-12, 15, and 17-27 are currently pending in the case. Further examination and reconsideration of the presently claimed application are respectfully requested.

Section 103(a) Rejections

Claims 1-4, 7-12, 15, and 17-25 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,093,631 to Jaso et al. (hereinafter referred to as "Jaso") in view of U.S. Patent No. 5,972,792 to Hudson (hereinafter referred to as "Hudson"). To establish a *prima facie* obviousness of a claimed invention, all claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 U.S.P.Q. 580 (C.C.P.A. 1974), MPEP 2143.03. Obviousness cannot be established by combining or modifying the teachings of the prior art to produce the claimed invention, absent some teaching or suggestion or incentive to do so. *In re Bond*, 910 F. 2d 81, 834, 15 USPQ2d 1566, 1568 (Fed. Cir. 1990). The cited art does not teach or suggest all limitations of the currently pending claims, some distinctive limitations of which are set forth in more detail below. As such, the § 103(a) rejections of claims 1-4, 7-12, 15, and 17-25 is respectfully traversed.

Neither Jaso nor Hudson teach or suggest etching a plurality of laterally spaced dummy trenches into a dielectric between a relatively wide trench and a series of relatively narrow trenches. Claim 1 recites in part: "[a] method, comprising: etching a plurality of laterally spaced dummy trenches into a dielectric layer between a relatively wide trench and a series of relatively narrow trenches ... ." Claim 9 includes a similar limitation. Hudson fails to disclose the inclusion of dummy structures in the method described therein and, therefore, provides no motivation to teach the limitations of claims 1 and 9. In addition, as noted on page 2 of the Office Action, "Jaso [does] not expressly teach that the first trench is a relatively wide trench and the series of second trenches are relatively narrow trenches."

The Office Action, however, interprets Jaso as suggesting that the teachings therein can be applied to a situation of wide and narrow trenches. In particular, the Office Action cites column 3, lines 38-43 of Jaso, "[in] another aspect of the invention, a method is provided to set a predetermined high pattern factor design limit of say 60-90%, preferably 70-80%. Using this method, the difference between the high pattern factor areas and the low pattern factor areas is minimized due to the lower upper design limit of the HPF areas." There is no teaching or suggestion within such a passage, h wever, of etching dummy

trenches specifically between different size trenches. Rather, the cited passage merely refers to minimizing the density distribution differences between regions of the wafer. Jaso teaches minimizing density distributions by adding dummy lines to regions of a wafer. In particular, Jaso illustrates and describes different arrangements of dummy lines 20 in region 17 of Figs. 3a-9b, relative to lines 15. As shown in Figs. 3a-9b, Jaso specifically teaches the addition of dummy lines 20 between lines 15 which are uniform in width. Without a specific teaching or suggestion that a dummy trench may be placed between trenches of differing widths and produce a substantially planar surface having conductive structures formed therefrom, there is no inherent teaching in the passage cited in the Office Action of the limitations of claim 1 or 9. Consequently, the limitations of claims 1 and 9 are asserted to be unobvious in light of the cited art.

None of the cited art teaches or suggests a semiconductor topography with a plurality of laterally spaced dummy trenches between a relatively wide trench and a series of relatively narrow trenches, wherein a lateral dimension of at least one of the dummy trenches is less than a lateral dimension of the wide trench and greater than a lateral dimension of at least one of the series of relatively narrow trenches. Claim 17 recites in part:

> A substantially planar semiconductor topography, comprising: a plurality of laterally spaced dummy trenches in a dielectric layer, between a relatively wide trench and a series of relatively narrow trenches, wherein a lateral dimension of at least one of the dummy trenches is less than a lateral dimension of the wide trench and greater than a lateral dimension of at least one of the series of relatively narrow trenches ...

Jaso does not teach or suggest a topography with a dummy trench having a different lateral dimension than an adjacent relatively wide trench and/or an adjacent series of relatively narrow trenches. In fact, Jaso illustrates dummy lines 20 having the same dimensions as lines 15a-15d, which all have the same dimensions as shown in Fig. 11D. Consequently, the statements in the Office Action citing that trench 15d in Jaso is equivalent to a relatively wide trench and trenches 15a-15c are equivalent to a series of relatively narrow trenches are asserted to be erroneous. As noted above with regard to the patentability of claims 1 and 9, Jaso does not teach, suggest or provide motivation to create a topography with dummy trenches interposed between trenches of varying widths. As such, there is no motivation within Jaso to teach the limitations of claim 17.

For the sake of argument, even if Jaso suggested a topography comprising trenches with varying widths, there is no motivation within Jaso to create a topography having a dummy trench with a different width than trenches arranged adjacent thereto. In particular, in addition to the illustration of Fig. 11D, Jaso specifically teaches that it is preferred "... to mimic the size of the chip circuitry." (Jaso, column 4, lines 5-6) and, therefore, does not teach, suggest or provide any motivation to have dummy trenches with different widths than adjacent trenches. Hudson does not disclose a topography with a dummy trench and, therefore cannot be used to teach the limitations of claim 17 alone or in combination with Jaso. As such, claim 17 is asserted to be patentably distinct over the cited art.

For at least the reasons set forth above, none of the cited art, either individually or in combination, teaches, suggests, or provides motivation for all limitations of independent claims 1, 9, or 17. Therefore, claims 1, 9, and 17, as well as claims dependent therefrom, are patentably distinct over the cited art. Accordingly, Applicants respectfully request removal of this rejection.

Patentability of the Added Claims

The present Amendment adds claims 26 and 27, which are dependent upon claims 1 and 9, respectively. Accordingly, added claims 26 and 27 are patentably distinct for at least the same reasons as their respective base claim. Support for the limitations of the added claims may be found, for example, on page 16, lines 6-8: "[p]referably, the polishing liquid forwarded onto the abrasive polishing surface is deionized water. The polishing liquid may also be other types of liquids which have a near-neutral pH." Accordingly, approval of added claims 26 and 27 is respectfully requested.

CONCLUSION

This response constitutes a complete response to all issues raised in the Office Action mailed November 14, 2003. In view of the remarks traversing the rejections, Applicants assert that pending claims 1-4, 7-12, 15, and 17-27 are in condition for allowance. If the Examiner has any questions, comments, or suggestions, the undersigned attorney earnestly requests a telephone conference.

No fees are required for filing this amendment; however, the Commissioner is authorized to charge any additional fees which may be required, or credit any overpayment, to Conley Rose, P.C. Deposit Account No. 03-2769/5298-02502.

Respectfully submitted,

Kevin L. Daffer
Reg. No. 34,146
Attorney for Applicants

Conley Rose, P.C.
P.O. Box 684908
Austin, TX 78768-4908
Ph: (512) 476-1400
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MEL